

## 1 CLAIMS

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3 1. A method for classifying messages, comprising the steps of:  
4 recognizing patterns including words and groups of words in a messages;  
5 applying a plurality of machine learning techniques responsive to the rec-  
6 ognized patterns in order to classify the message.

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8 2. A method as in claim 1, wherein the machine learning techniques  
9 include neural networks.

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11 3. A method as in claim 2, wherein the neural networks are pre-  
12 trained to classify the message as a good message, a bulk message, or a spam message.

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14 4. A method as in claim 2, wherein the neural networks further com-  
15 prise at least two levels of neural networks.

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17 5. A method as in claim 4, wherein the two levels of neural networks  
18 include a first level that determines if the message is likely good or likely spam, and a  
19 second level that determines if a likely good message is good and if a likely spam mes-  
20 sage is spam.

1           6.     A method as in claim 4, wherein the two levels of neural networks  
2 include a first level that determines if the message is likely good or likely spam, and a  
3 second level that determines if a likely good message is good or bulk and if a likely  
4 spam message is spam or bulk.

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6           7.     A method as in claim 4, wherein for at least one of the classifica-  
7 tions the neural networks classify the message in one of three classifications, wherein  
8 more than one path through the neural networks exists for the message to arrive at that  
9 classification.

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11          8.     A method as in claim 1, further comprising the step of dynamically  
12 maintaining the neural networks responsive to classification of the message.

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14          9.     A method as in claim 1, further comprising the step of applying  
15 rules to the message to help classify the message.

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17          10.    A method as in claim 9, wherein if the message is classified by the  
18 rules, the step of applying the neural networks is skipped.

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20          11.    A method as in claim 9, wherein the rules utilize a whitelist, a  
21 blacklist, or both the whitelist and the blacklist.

1           12.    A method as in claim 11, further comprising the step of dynami-  
2   cally maintaining the whitelist, the blacklist, or both the whitelist and the blacklist re-  
3   sponsive to classification of the message.

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5           13.    A method as in claim 11, wherein the step of recognizing expres-  
6   sions further includes the step of applying a genetic algorithm to select a set of regular  
7   expressions to be recognized.